

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
)
Amendment of Part 101 of the Commission's Rules to)
Facilitate the Use of Microwave for Wireless Backhaul)
and Other Uses and to Provide Additional Flexibility to)
Broadcast Auxiliary Service and Operational Fixed)
Microwave Licenses, WT Docket 10-153)

**REPLY COMMENTS OF WIRELESS STRATEGIES INC.
REGARDING THE NOTICE OF INQUIRY
REVIEW OF PART 101 ANTENNA STANDARDS WT DOCKET 10-153**

Dear Ms. Dortch:

I. Introduction

A review of the comments and reply comments to WT Docket 10-153, Notice of Inquiry (NOI), Section B, Review of Antenna Standards, shows a general agreement for the allowance of smaller antennas. Wireless Strategies Inc ("WSI") also supports the use of smaller antennas but only under a regimen that does not cause interference greater than that of a Category A antenna, and we believe this can be accomplished by a minor revision to Rule 101.115(f).

II. Reply Comments

WSI agrees with Aviat Networks¹ that site lease charges are a major factor in making the provisioning of many services uneconomic, and with FiberTower² that large antennas make deployment problematic.

The smallest Category A antenna size for a 6GHz point-to-point link would have a diameter of six feet. With a typical site lease charge of \$100 per foot of antenna diameter, the antenna site lease charges alone would be \$1,200 per month (2 x 6 x \$100). This would be the minimum monthly cost of service even if there were no capitalized expenses (the cost of the microwave equipment and installation were zero) and if there were no operating costs (SG&A).

In addition to the antenna site lease charges, obtaining permission to deploy a 6-foot diameter antenna on many structures can be problematic. So, under present regulations the use of the upper and lower 6GHz bands is only viable for a small percentage of the market need. Therefore,

¹ Aviat Networks Inc. filed comments in this proceeding October 25, 2010

² FiberTower Corporation, filed comments in this proceeding October 25, 2010

WSI believes the antenna diameter needs to be two feet or less to make FS microwave a viable option for backhaul, enterprise and consumer markets, especially to unserved and underserved communities.

III. Proposal

Rule 101.115(f) details the conditions governing the deployment of Category B antennas in the 10,700-11,700 MHz band. WSI proposes that the conditions be revised to cover all directional antennas not meeting Category A standards in the 6GHz and 11GHz bands. The suggested changes are given below (additions are underlined and deletions have a strike-through).

Rule 101.115(f)

"In the 5,925 – 6,425MHz, 6,525 – 6,875MHz and 10,700 – 11700MHz bands a fixed station may employ transmitting and receiving antennas not meeting performance standard ~~B~~ A in any area. If a Fixed Service or Fixed Satellite Service licensee or applicant makes a showing that it is likely to receive interference from such fixed station and that such interference would not exist if the fixed station used an antenna meeting a higher performance standard up to and including standard A, the fixed station licensee must modify its use. Specifically, the fixed station licensee must either substitute an antenna meeting a higher performance standard ~~A~~ or operate its system with an EIRP reduced so as not to radiate, in the direction of the other licensee, an EIRP in excess of that which would be radiated by a station using a Category A antenna operating with the same ~~maximum~~ EIRP ~~allowed by the rules~~. A licensee or prior applicant using an antenna that does not meet performance standard A may object to a prior coordination notice based on interference only if such interference would be predicted to exist if the licensee or prior applicant used an antenna meeting performance standard A."

IV. Conclusions

The proposed changes would allow designers and users of FS microwave to minimize the cost and make it easier to comply with local zoning and homeowner association rules and ensure that the use of antennas not meeting Category A requirements do not increase the potential for harmful interference. Also, the changes address the concern expressed by Comsearch³ that applicants proposing to use small antennas might "...boost transmit power to make-up for the difference in gain" for the following reasons:

1. Rule 101.103 requires that a new applicant must demonstrate through the prior coordination process that proposed new stations will not cause harmful interference. This requirement applies to the use of any antenna.
2. The existing provision "*...the fixed station licensee must either substitute an antenna meeting performance standard A or operate its system with an EIRP reduced so as not to radiate, in the direction of the other licensee, an EIRP in excess of that which would be radiated by a station using a Category A antenna operating with the maximum EIRP allowed by the rules*" has been

³ Comsearch, filed reply comments in this proceeding April 14, 2011

replaced with "... the fixed station licensee must either substitute an antenna meeting a higher performance standard or operate its system with an EIRP reduced so as not to radiate, in the direction of the other licensee, an EIRP in excess of that which would be radiated by a station using a Category A antenna operating with the same EIRP."

The benefits of such an antenna rule change would be:

- No increased potential to cause harmful interference or to block new applicant paths
- Lower monthly antenna site lease charges
- Lower cost to manufacture
- Easier and therefore less expensive to install
- Lower cost to maintain
- Makes them practical for installation at sites incapable of supporting large antennas
- Raise fewer aesthetic objections
- Permit easier compliance with local zoning and homeowner association rules
- Create employment opportunities in microwave R&D, manufacturing and construction
- Permit the users of the bands to efficiently match the antenna to the application

WSI therefore requests that the Commission act expeditiously to amend Rule 101.115(f) as proposed, so as to bring the above benefits to the wireless industry and the American consumer without further delay.

Respectfully submitted

Michael Mulcay,

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October 4, 2011

cc:

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